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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,766	03/29/2006	Rui Resendes	CH8354PS1148	3999

7590 12/18/2009
Jennifer R. Seng
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Pittsburgh, PA 15275-1112

EXAMINER

HARLAN, ROBERT D

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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12/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,766	Applicant(s) RESENDES ET AL.	
	Examiner Robert D. Harlan	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/14/2009 has been entered.

2. The Remarks filed by Applicant on 12/14/2009 has been entered.

Response to Arguments

3. Applicant's arguments filed on 12/14/2009 have been fully considered and they are found unpersuasive.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-7 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Hergenrother et al., U.S. Patent No. 6,180,710 (hereinafter "Hergenrother") in combination with Cruse et al., U.S. Patent No. 6,608,125 (hereinafter "Cruse"). Hergenrother teaches a composition precipitated silica, adherent inorganic salts, a byproduct of precipitated silica that promotes better interaction between silica and rubber, which is selected of halobutyl rubber (commonly referred to as bromobutyl), among others. See Hergenrother, col. 2, line 40 through col. 4, line

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165 and col. 4, lines 60 through col. 5, line 19. Hergenrother further teaches the use of silane coupling agents including silanes that can have mercaptan groups. See Hergenrother, col. 2, lines 7-10 and col. 4, lines 17-37. Hergenrother also teaches as shown in Table IV a process for curing a filled rubber composition. See Hergenrother, col. 11, lines 52-67, Table IV. Hergenrother differs from the present invention in that the present invention requires a protected thiol modifier (blocked mercapto silane).

7. The basic requirements of prima facie case of obvious are: (1) there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP 2143. "There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). The Applicant argues one skilled in the art would find

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no motivation in either reference to combine the two technologies and would not be motivated to use the blocked mercapto silanes of Cruse in curing halobutyl rubber briefly mentioned in Hergenrother.

8. Cruse teaches in analogous art a block mecaptosilane-coupling agents for filled rubbers. See Cruse, Abstract; col. 2, lines 22-53. In view of Cruse, one having an ordinary skill in the art would be motivated to modify Hergenrother by using an block mecaptosilane-coupling agents in the filled rubber composition because Hergenrother makes it clear that silane coupling agents with mercapto- groups are desirable with its filled rubber composition. Such modification would be obvious because one would expect that the use of a filled rubber composition as taught by Hergenrother is to be similarly useful and applicable to the filled rubber composition taught in Cruse. The two references are not only both directed to rubber compositions but also are both directed to filled rubber composition with silane based additives.

9. The basic requirements of prima facie case of obvious are:
(1) there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to

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one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP 2143. "There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). The Applicant argues one skilled in the art would find no motivation in either reference to combine the two technologies and would not be motivated to use the blocked mercapto silanes of Cruse in curing halobutyl rubber briefly mentioned in Hergenrother. The Applicant further argue the Hergenrother utilize the hydrophilic end of the silane molecules in combination with inorganic salt while the teachings of Cruse utilize the hydrophobic end of the block mercaptosilane molecules. The Examiner contends that there is adequate motivation found the each of the references related to filled rubber composition to arrive at a filler and at least one protected thiol modifier. The examiner further contends the claims are not directed to a particular mode of connectivity (e.g., hydrophobic/hydrophilic end), but the presences of

entities that make of a filled halobutyl elastomer composition. Thus, claims 1-7 are held as obvious and unpatentable in lighter Hergenrother in light of Cruse.

Response to Applicant's Remark

10. The Applicant's argue the mineral filler in instant claim 1 is not the same filler as described in Hergenrother. As set forth in the instant Specification, examples of mineral fillers include highly dispersed silica, prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides. The claims are examined in the broadest light possible. Upon closer inspection, the present specification (including page 6, lines 26-27) does not restrict the definition of mineral fillers to highly dispersed silica, prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides. It is suggested the Applicant restrict the scope of "mineral filler" by amendment. The Applicant gives an example of mineral filler as highly disperse silica giving mere examples of preparation not restricted limitations.

11. As stated above, there is ample motivation to replace the thiol disclosed in Hergenrother with a block mercaptan disclosed in Cruse. There is no teaching away or suggestion that Curse

cannot be combined with Hergenrother. The Examiner finally argues the combination of Hergenrother with Curse does teach each limitation of the present invention.

12. This is a RCE of applicant's earlier Application No. 10/573,766. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however,

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event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Harlan whose telephone number is (571) 272-1102. The examiner can normally be reached on Mon-Thu, 10 AM - 8 PM.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 273-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or
access to the automated information system, call 800-786-9199
(IN USA OR CANADA) or 571-272-1000.

/Robert D. Harlan/
Primary Examiner
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rdh